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COMPLETE SPECIFICATION.

Manufacture of a Base Material for Thick Sauces.

We, WILLIAM EVANS & CO. (HEREFORD AND DEVON) LIMITED, a British Company, whose registered address is Widemarsh, Hereford, Herefordshire, and RONALD SURMAN POTTER, a British Subject, of Rams Corner, Little Cowarne, Herefordshire, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to the manufacture of a base material for use in the preparation of thick sauces, and more especially thick fruit sauces, such as are usually composed mainly of a fruit pulp, for example, the pulp of dates, raisins or tamarinds, or tomato puree, and contain flavouring substances and are thickened by the addition of a thickening agent such as gum tragacanth, gum karaya, starch, alginic acid or the like, which thickening agent is boiled with the sauce mixture.

An object of the present invention is to provide a base material for such sauces which is inexpensive and can be used to replace wholly or in part the usual fruit pulps and wholly or in part the thickening agents referred to above, which also have a stabilising action in maintaining the sauce homogeneous. The base material is made from apple pomace, that is to say, the residue of apples which remains after the juice has been extracted from apples.

According to the invention, the base material is made by cooking apple pomace in an aqueous medium in the presence of an alkali until the tissue is softened and the pectic substances are taken into solution, and then disintegrating the resulting pulp to produce a stable suspension of the solid material and acidifying it to reprecipitate the pectic substances in the interstices of the cellular mass.

The base material made in the above manner also has the advantage of imparting stability to sauces made therewith, so that the tendency for the separation of a clear liquid therefrom during storage is avoided or considerably reduced. Moreover, no thickening agents or smaller amounts thereof are required to impart the desired viscosity to the sauce.

The apple pomace used may contain the normal amount of water or may have been previously dried, and it may or may not have been previously depectinised. It will be understood, however, that depectinisation does not entirely remove the pectice substances.

The steps of disintegration and acidification may be carried out in either order of succession. Advantageously, the quantity of alkali present in the aqueous medium containing the apple pomace to be cooked is such as to impart a *p*H value of 8.5 to 11.0 to the said medium, and the pulp is acidified to give it a *p*H value of 2.5 to 4.5. The disintegration is advantageously carried out in a micro-disintegrator or homogeniser.

The extent of the cooking and the amount of alkali used in the cooking operation, and the amount of acid used for reprecipitation, vary depending on the nature of the apple pomace used. For instance, with freshly dried pomace a shorter period of cooking at a lower *p*H value will be required than with pomace which has been stored for, say, twelve months. It is of advantage to use sodium carbonate as the alkali and hydrochloric acid as the acid.

The following is an example of the process of the invention: 1 cwt. of dried apple pomace (the dried residue remaining after the juice has been expressed from apples for making cider) is soaked in 200 gallons of water, and a quantity of sodium carbonate is added sufficient to bring the *p*H value of the mixture to about 9. Soaking is continued for a period depending on the nature

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of the pomace, and the mixture is then boiled until the tissue has become soft. The mixture is then brushed through a fine sieve to remove the hard tissue consisting of apple skin, core and seeds. The resulting pulp is then acidified to a *p*H value of about 4.5 by the addition of hydrochloric acid. The acidified pulp is then passed through a micro-disintegrator or homogeniser of suitable design so as to reduce the particle size of the suspended solid material to such an extent that it will not separate from the liquid phase on standing, that is to say, so that the pulp remains homogeneous permanently or for a very long period.

The base material made in accordance with this invention may be used directly for the preparation of thick sauces, especially fruit sauces, or may be preserved by sterilisation or by the addition of a chemical preservative such as sulphur dioxide or the like.

What we claim is:—

1. A process for the manufacture of a base material for use in the preparation of thick sauces, wherein apple pomace is cooked in an aqueous medium in the presence of an alkali until the tissue is softened and the pectic substances taken into solution, and then the resulting pulp is disintegrated to produce a stable suspension of the solid material and acidified to reprecipitate the pectic substances in the interstices of the cellular mass.

2. A process as claimed in Claim 1, wherein the disintegration of the pulp is carried out in a micro-disintegrator or homogeniser.

3. A process as claimed in Claim 1 or 2, wherein apple pomace which has been previously dried is used as starting material.

4. A process as claimed in Claim 1, 2 or 3, wherein the quantity of alkali present in the aqueous medium containing the apple pomace to be cooked is such as to impart a *p*H value of 8.5 to 11.0 to the said medium.

5. A process as claimed in any one of Claims 1—4, wherein the pulp is acidified to give it a *p*H value of 2.5 to 4.5.

6. A process as claimed in any one of Claims 1—5, wherein sodium carbonate is used as the alkali and hydrochloric acid as the acid.

7. A process for the manufacture of a base material for use in the preparation of thick sauces, conducted substantially as described in the example herein.

8. A base material for use in the preparation of thick sauces, whenever made by the process claimed in any one of Claims 1—7.

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PROVISIONAL SPECIFICATION.

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According to the invention, the base material is made by cooking apple pomace in an aqueous medium in the presence of an alkali until the tissue is softened and the pectic substances are taken into solution, disintegrating the resulting pulp, for example, in a micro-disintegrator or homogeniser, to produce a stable suspension of the solid material, and then acidifying the pulp to reprecipitate the pectic substances in the interstices of the cellular mass.

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